

HM Wire International, Inc.

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ANODIZED COATING AND INSULATION OF ALUMINUM WIRE - RIBBON STRIP

Aluminum oxide insulated wire is unique, with its flexibility, thinness and transparency.

Applications like electronics, missiles aircrafts and atomic reactor are a few to name for this type of wire. The oxide film is highly flexible, suitable for all windings of any size and shape of coils.

With good dielectric properties of 1000 volts per mil, this inorganic and chemical inert film will not age, or deteriorate in storage. Higher ratings per unit and reduction in size are now possible for those designing electro-magnetic components. If the design is done correctly then less insulation is needed and less dielectric loss is experienced.

With a round or flat conductor, the balancing of rotary equipment is much simpler. With this lower mass, it is proven that a higher frequency occurs for voice coil construction and microphone applications. In high temperature operations Al_2O_3 insulation operates cooler and will not oxidize.

Aluminum for electric conductors that are found in small motors, solenoids, transformers and relays with precision layer requirements has a resistance of about 34.5 ohms/mm², which is equal to 62% of electrolytic copper; this means that equal conductivity weighs only 50% of that of a comparable copper conductor.

The thin insulation of .0001" allows winding in any form, including miniature coils and high-destiny coils. The resistance of the formed alumina film is about 1800 ohms per cm².